Application No. 09/990,916
Amendment dated March 9, 2007
Response to Final Office Action of January 11, 2007

Atty. Docket No. 42390.P11857
Examiner Dalencourt, Yves
TC/A.U. 2157

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-29   (Cancelled)

30.   (Currently Amended) A method comprising:

identifying a communication capability of a remote device;

automatically aggregating multiple media access controllers (MACs), based, at least in part, on the identified communication capability of the remote device, the aggregated MACs to ~~establish~~ facilitate a network interface in communicating with the remote device, the communicating via a virtual data sub-channel within a physical data channel ~~for communication between a communication interface and the remote device~~;

determining whether a data rate of the virtual sub-channel is compatible with the communication capability of the remote device; and

reducing the data rate of the virtual sub-channel if the data rate is not compatible with the communication capability of the remote device.

31.   (Previously Presented)   A method according to claim 30, wherein the communication link is an IEEE 802.3ae compliant communication link, with a data channel of 10 gigabit per second (Gb/s).

32.   (Previously Presented)   A method according to claim 30, wherein identifying a communication capability of the remote device comprises:

sending a capability request; and

receiving a response to the request denoting at least the communication capability of the remote device.

33.   (Previously Presented)   A method according to claim 30, wherein identifying a communication capability of the remote device comprises:

receiving an indication from the remote device denoting the communication capability of the remote device.

34.   (Previously Presented)   A method according to claim 33, wherein the indication also denotes a processing capability of the remote device.

35.   (Previously Presented)   A method according to claim 30, wherein the communication capability of the remote device is obtained by the communication interface through a negotiation process.

36.   (Previously Presented)   A method according to claim 30, wherein establishing the virtual data sub-channel within a physical Ethernet data channel comprises establishing a sub-10 gigabit per second (Gb/s) virtual data channel within a physical 10Gb/s data channel.

37.   (Previously Presented)   A method according to claim 30, wherein reducing the data rate of the virtual sub-channel comprises inserting idle control elements between substantive frames of a data stream of the virtual sub-channel.

38.   (Previously Presented)   A method according to claim 36, wherein establishing the virtual sub-channel comprises:

        automatically aggregating 1Gb/s media access controllers (MACs) to establish the virtual sub-channel; and

        dynamically multiplexing the 1Gb/s MACs to appropriate channels of an attachment unit interface (AUI).

39.   (Currently Amended) A storage medium comprising content which, when executed by an accessing computing appliance, causes the appliance to implement a scalable network interface to:

        automatically aggregate multiple media access controllers (MACs) to ~~establish~~ facilitate the network interface in communicating with a remote device, the communicating via a virtual channel within a physical Ethernet channel, the automatic aggregating based, at least in part, on an identified communication capability of [[a]] the remote ~~network element~~ device;

        determine whether a data rate of the virtual channel is compatible with the communication capability of the remote device; and

        further reduce the data rate of the virtual channel if the data rate is not compatible with the communication capability of the remote device.

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40.   (Previously Presented)   A storage medium according to claim 39, wherein the physical Ethernet channel is a 10 gigabit per second (Gb/s) data channel, while the virtual channel is a sub-10Gb/s data channel, wherein the size of the virtual channel is selected to correspond with the identified communication capability of the remote network element.

41.   (Previously Presented)   A storage medium according to claim 39, the scalable network interface comprising negotiation feature(s) to identify one or more of a communication capability of a remote device and a processing capability of a remote device.

42.   (Previously Presented)   A storage medium according to claim 39, wherein the scalable network interface establishes a virtual channel by dynamically aggregating one or more 1Gb/s media access controller(s) (MAC) and routing content from the aggregated MAC(s) through one or more attachment unit interface (AUI) channel(s), as appropriate.

43.   (Currently Amended) An apparatus comprising:

control logic, to identify a communication capability of a remote device communicatively coupled with the control logic through a communication link; and

a plurality of media access controllers (MACs), responsive to the control logic, automatically aggregated by the control logic to facilitate the apparatus in communicating with the remote device via to establish either a 10 gigabit per second (Gb/s) physical

channel or a sub-10Gb/s virtual channel within the 10Gb/s physical channel ~~to facilitate communication from the apparatus to the remote device~~, the automatic aggregating based, at least in part, on the identified communication capability of the remote device, wherein the control logic further to determine whether a data rate of the established channel is compatible with the communication capability of the remote device and cause the aggregation of MACs to reduce the data rate of the established channel if the data rate is not compatible with the communication capability of the remote device.

44.   (Currently Amended) An apparatus according to claim [[45]] 43, further comprising:

        an attachment unit interface (AUI), coupled with the MAC(s), the AUI having four (4) 10Gb/s attachment unit interface (XAUI) channels, each channel supporting [[up to]] 2.5Gb/s communication rates which are aggregated to provide the 10Gb/s physical channel.

45.   (Previously Presented)   An apparatus according to claim 44, wherein the plurality of MAC(s) include 1Gb/s MAC(s), and wherein one or more 1Gb/s MAC(s) are dynamically selected to establish a sub-10Gb/s virtual channel within the 10Gb/s physical channel.

46.   (Previously Presented)   An apparatus according to claim 45, wherein up to two 1Gb/s MAC(s) are coupled to a XAUI channel, wherein when so coupled each XAUI channel selectively provides 1Gb/s virtual channel resolution within the 10Gb/s physical channel.

47.   (Previously Presented)   The apparatus of claim 43, the attachment unit
interface comprising:

at least four (4) 10 gigabit attachment unit interface (XAUI) channel(s), wherein
content from up to two (2) 1Gb/s MAC(s) are selectively routed through each of the four
XAUI channels such that each XAUI channel supports 1Gb/s virtual channels.

48.   (New) An apparatus according to claim 43, further comprising:

an attachment unit interface (AUI), coupled with the MAC(s), the AUI having
multiple 10Gb/s attachment unit interface (XAUI) channels which are aggregated to
provide the 10Gb/s physical channel.